Docket No.:  63956-011                                      **PATENT**

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of                    :

Antonio Cantoni, et al.                 :

Serial No.:  09/919,725                 :    Group Art Unit: 2662

Filed:  July 31, 2001                   :    Examiner: Unknown

For:   TRANSFER OF MESSAGES IN A MULTIPLEXED SYSTEM

### Reissue Declaration

Commissioner for Patents
Washington, DC  20231

Sir:

As a below named inventor, I hereby declare that:

My residence, post office and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter claimed and for which a patent is sought on the invention entitled TRANSFER OF MESSAGES IN A MULTIPLEXED SYSTEM, the specification of which

☐ is attached hereto.
☒ was filed on July 31, 2001 as Application Serial No. 09/919,725 and was amended in first, second, third and consolidating preliminary amendments filed heretofore and in an amendment following interview filed on December 13, 2002.

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is known to me to be material to patentability in accordance with Title 37, Code of Federal Regulations, Section 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, Section 119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

**Prior Foreign Applications(s):**

| Number | Country | Day/Month/Year filed | Priority Claimed |
|--------|---------|----------------------|------------------|
| PI0884 | Australia | Mar 17, 1987 | x |
| PCT/AU88/00075 | Australia | March 17, 1988 | x |

I hereby claim the benefit under 35 USC §119(e) of any United States provisional application(s) listed below.

**Prior Provisional Application(s):**

| Application Number | Filing Date |
|--------------------|-------------|

I hereby claim the benefit under Title 35, United States Code, Section 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, Section 112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, Section 1.56 which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

**Prior U.S. Application(s):**

| Serial No. | Filing Date | Status: Patented, Pending, Abandoned |
|------------|-------------|--------------------------------------|
| 07/283,364 | April 28, 1989 | now U.S. Patent No. 5,050,166 issued September 17, 1991 |

The applicant believes that the original patent to be wholly or partly inoperative by reason of the patentee claiming less than he had a right to claim, namely by failing to assert claims of the following scope:

(Note claims 1-14 were issued in a previous reissue application Serial No. 122,934 Filed: September 17, 1993, now U.S. reissued patent RE 37,494 which issued on January 1, 2002. That U.S. reissue patent and this application are divisional reissue applications of U.S. patent 5,050,166.)

15. A method of transmitting variable length messages on a network from a source to a destination, said method comprising

    segmenting each message into a plurality of fixed length slots, each of which slots includes a header field and a message segment,

    providing a source identifier field in the header field of each slot, said source identifier field including a source identifier code that is uniquely associated with the message to be transmitted,

    providing a type field in the header of each slot,

    coding into the type field, a code selected from a first code, a second code, and a third code, respectively representing a beginning of a message, a continuation of a message, and an end of a message,

    transmitting the slots on the network, and

    controlling the reassembly of received slots at the destination in accordance with said source identifier code, the first code, the second code, and the third code.

16. Cancelled.

17. A method as claimed in claim 15, further comprising

    transmitting a destination address field in the message segment of the first slot of the message, and

    checking a destination address field associated with the message, for a match with an address associated with the destination.

18. A method as claimed in claim 15, further comprising storing message segments associated with a single message in a buffer.

19. A method as claimed in claim 18 further comprising

providing the source identifier code to a comparator in response to detection of said first code at said destination, and

in response to detection of the second code associated with a subsequently received slot providing the source identifier thereof to the comparator to check for a match, and

storing the message segment of the subsequently received slot in said buffer in response to detection of a match.

20. A method as claimed in claim 19, further comprising outputting the reassembled slots in the buffer from the buffer as a reassembled message in response to detection of said third code.

21. A method as claimed in claim 15, further comprising

coding, into the type field, a fourth code representing a single segment message, and

if said fourth code is detected in a slot received at the destination, storing the message segment thereof in a single segment buffer.

22. A method as claimed in claim 20, further comprising

providing multiple comparators and buffers at the destination so as to

enable simultaneous receipt of a plurality of messages, each having its

own source identifier code, and

storing the message segments of each message in respective buffers.

23. Apparatus for transmitting variable length messages on a network from a

source to a destination in fixed length slots, said apparatus including;

a segmentation machine for segmenting the messages into fixed length

slots, each of which includes a header field and a message segment,

said segmentation machine including coding means

for providing a source identifier field in the header of each slot, said

source identifier field including a source identifier code that is

uniquely associated with the message to be transmitted, and

for providing a type field in the header field of each slot, and

for providing a code selected from a first code, a second code, and

a third code representing, respectively, a beginning of a

message, a continuation of a message and an end of a

message; and

a reassembly machine located, in use, at the destination, said reassembly

machine including control means for controlling reassembly of the slots

in accordance with respective source identifier codes of the slots, said

control means being responsive to said source identifier code, said first

code, said second code, and said third code.

**24.** Cancelled

**25.** Apparatus as claimed in claim **23** wherein the message includes a destination address field and wherein the segmentation machine is arranged to transmit the destination address field in the message segment of the first slot of the message.

**26.** A method of transmitting a variable-length message on a network from a source having a source address to a destination having a destination address, said method comprising:

segmenting the variable-length message into a plurality of fixed length slots including a first slot, continuing slots, and a last slot, each of said fixed length slots including

a header field that includes a source identifier field, the source identifier field being substantially shorter than said destination address, and

a message segment;

providing a source identifier code in the source identifier field, said source identifier code being associated with the variable-length message;

providing a type field in the header of each slot,

coding, into the type field, a code selected from:

a first code representing a beginning of a message,

a second code representing a continuation of a message, and

a third code, representing an end of a message;

transmitting the slots on the network; and

controlling reassembly of slots at the destination in accordance with the
source identifier code, first code, second code, and third code of slots
received at the destination.

27. Apparatus for transmitting variable-length messages on a network from a
source having a source address to a destination having a destination address in
fixed length slots, said apparatus including:

a segmentation machine for segmenting each message into a plurality
of fixed length slots including a first slot, continuing slots, and a last
slot, each of said slots including

a header field that includes a source identifier field, the source
identifier field being substantially shorter than said destination
address,

and a message segment;

coding means for providing the source identifier field with a source
identifier code that is uniquely associated with the message to be
transmitted for providing a type field in the header field of each slot,
and for providing a code selected from a first code, a second code, and
a third code representing, respectively, a beginning of a message, a
continuation of a message and an end of a message; and

a reassembly machine located, in use, at the destination, said
reassembly machine including control means for controlling

reassembly of slots in accordance with respective source identifier codes, the first code, the second code, and the third code of the slots.

28. A method for the connection-oriented transfer of variable-length messages in fixed-length slots from a source node having a source address to a destination node having a destination address, the method comprising:

   segmenting each message into a plurality of fixed-length slots including a first slot, continuing slots and a last slot, each of the slots including a header field and a message segment;

   providing, in the header field of each of the slots, a source identifier code associated with the message,

   providing a type field for holding a code in the header of each slot,

   coding into the type field, a code selected from a first code, a second code, and a third code, respectively representing a beginning of a message, a continuation of a message, and an end of a message,

   transmitting the slots from the source node; and

   controlling reassembly of the message on the basis of information in the header field of slots received at the destination node.

29. The method as claimed in claim 28 further comprising storing, in a buffer at the destination node, message segments associated with a single message.

30. The method as claimed in claim 29, further comprising

providing, to a comparator, the source identifier code of the first slot received at the destination node;

providing, to the comparator, the source identifier code of each subsequently received slot; and

storing the message segment of the subsequently received slot in the buffer in response to an occurrence of a match between the source identifier code of the first slot and the source identifier code of subsequent slots.

31. The method as claimed in claim 30, further comprising outputting a reassembled message from the buffer in response to detection of the third code.

32. The method as claimed in claim 30, further comprising

providing multiple comparators and buffers at the destination node to enable simultaneous receipt of a plurality of messages, each having its own source identifier code, and

storing message segments from each message in a separate buffer.

33. An apparatus for the connection-oriented transfer of variable-length messages in fixed-length slots from a source node, having a source address, to a destination node, having a destination address, the apparatus comprising:

a segmentation machine for segmenting each message into a plurality of fixed-length slots including a first slot, continuing slots, and a last slot, each of the fixed-length slots including a header field, and a message

segment, the segmentation machine being located, in use, at the source node;

a coder for providing, in the header field of each slot,

a source identifier field for holding a source identifier code associated with the message to be transmitted, and

a type field, for holding a code selected from a first code, a second code, and a third code, respectively representing a beginning of a message, a continuation of a message, and an end of a message, and

a reassembly machine for controlling reassembly of slots into the message in accordance with information in the header field, the reassembly machine being located, in use, at the destination node.

34. The apparatus as claimed in claim 33 wherein the reassembly machine further comprises a selector for checking the third code and for providing source identifier codes to the comparator for comparison with subsequently received source identifier codes.

35. The apparatus as claimed in claim 34, wherein the reassembly machine further comprises a plurality of comparators for enabling concurrent receipt of slots associated with different messages.

36. The apparatus as claimed in claim 35, further comprising means for providing source identifier codes of received slots to the plurality of comparators,

thereby enabling the comparators to match slots having the same source identifier codes.

37. The apparatus as claimed in claim 36, further comprising:

a plurality of buffers for the message segments of the slots, and

a buffer selector circuit for selecting a particular buffer for receipt of all message segments of slots having the same source identifier code.

38. The apparatus as claimed in claim 34, wherein the controller is configured to output a reassembled message from the buffer in response to detection of a third code, the reassembled message being associated with the source identifier code of the slot containing the detected third code.

39. The method of claim 15 in which the source identifier code is a label which enables the logical association of all segments belonging to said message and which enables them to be reassembled into the original message.

40. The apparatus of claim 23 in which the source identifier code is a label which enables the logical association of all segments belonging to said message and which enables them to be reassembled into the original message.

41. Cancelled

42. Cancelled.

43. Cancelled.

44.    Cancelled.

45.    A method of transmitting variable length messages on a network to a
       destination having a destination address, said method including the steps of:
segmenting each message into a plurality of fixed length slots including a first
       slot, continuing slots, and a last slot, each of said slots including a header
       field, which includes a source identifier field which is substantially shorter
       than said destination address, and a message segment;
providing a source identifier code in the source identifier field, each source
       identifier code being associated with the message to be transmitted;
entering said destination address in the message segment of said first slot;
       transmitting the slots on the network; and
controlling reassembly of slots in accordance with the source identifier code.

46.    Apparatus for transmitting variable length messages on a network to a
       destination, said apparatus including:
a segmentation machine segmenting each message into a plurality of fixed
       length slots including a first slot, continuing slots, and a last slot, each of
       said slots including a header field which includes a source identifier field
       and a message segment;
said segmentation machine providing a source identifier code in the source
       identifier field, each source identifier code being associated with the

message to be transmitted, and entering said destination address in the message segment of said first slot;

a transmitter transmitting the slots on the network; and

a reassembly machine controlling reassembly of slots in accordance with the source identifier codes.

47. The method of claim 15 in which the step of coding into the type field comprises using each of the first code, the second code, and the third code in the headers of slots associated with a message.

48. The apparatus of claim 23 in which the coding means provides each of the first code, the second code, and the third code in the headers of respective slots associated with a message.

49. The method of claim 26 in which the step of coding into the type field comprises using each of the first code, the second code, and the third code in respective headers of slots associated with a message.

50. The apparatus of claim 27 in which the coding means provides each of the first code, the second code, and the third code in the headers of slots associated with a message.

51. The method of claim **28** in which the step of coding into the type field comprises using each of the first code, the second code, and the third code in respective headers of slots associated with a message.

52. The apparatus of claim **33** in which the coder provides, in respective header fields of slots associated with a message, each of the first code, the second code, and the third code.

53. Cancelled.

54. Cancelled.

55. Cancelled.

56. Cancelled.

57. A method for connection-oriented transfer of variable-length messages in fixed-length slots via a source node and a destination node from a source having a source address to a destination having a destination address, the method comprising:

> segmenting each message into a plurality of fixed-length slots including a first slot, continuing slots and a last slot, each of the slots including a header field and a message segment;
>
> providing, in the header field of each of the slots, a source identifier code associated with the message,
>
> providing a type field in the header of each slot for holding a code,

coding into the type field a code for distinguishing a last slot from prior

slots;

transmitting the slots from the source node; and

controlling reassembly of the message in accordance with information in

the header fields of slots received at the destination node.


58. An apparatus for connection-oriented transfer of variable-length messages

in fixed-length slots via a source node and a destination node from a source

having a source address, to a destination having a destination address, the

apparatus comprising:

a segmentation machine for segmenting each message into a plurality of

fixed-length slots including a first slot, continuing slots, and a last slot,

each of the fixed-length slots including a header field, and a message

segment, the segmentation machine being located, in use, at the

source node;

a coder for providing, in the header field of each slot,

a source identifier field for holding a source identifier code associated with

the message to be transmitted, and

a type field, for holding a code for distinguishing a last slot from previous

slots; and

a reassembly machine for controlling reassembly of slots into the

message in accordance with information in the header fields of slots

received at the reassembly machine, the reassembly machine being located, in use, at the destination node.

59.    Apparatus for transmitting variable length messages in fixed length slots on a network, via a source node and a destination node, from a source having a source address to a destination having a destination address, said apparatus including;

a segmentation machine for segmenting the messages into fixed length slots, each of which includes a header field and a message segment, said segmentation machine including a coder providing

a source identifier field in the header of each slot, said source identifier field including a source identifier code that is associated with the message to be transmitted, and

a type field in the header field of each slot, and

a code in the type field selected from a first code, a second code, and a third code representing, respectively, a beginning of a message, a continuation of a message and an end of a message; and

a reassembly machine located, in use, at the destination, said reassembly machine controlling reassembly of the slots in accordance with respective source identifier codes of the slots, said reassembly machine being responsive to said source identifier code, said first code, said second code, and said third code.

60. Cancelled.

61. Cancelled.

62. Cancelled.

63. Cancelled.

64. The method of claim 58 in which the source identifier code is a label which enables the logical association of all segments belonging to said message and which enables them to be reassembled into the original message.

65. The method of claim 58 in which the step of coding, into the type field, field comprises using each of the first code, the second code, and the third code in the headers of slots associated with a message.

66. The method of claim 59 in which the source identifier code is a label which enables the logical association of all fixed length slots belonging to said message and which enables them to be reassembled into the original message.

67. The method of claim 59 in which the step of coding into the type field comprises using each of the first code, the second code, and the third code in the headers of slots associated with a message.

68. Cancelled.

**69.** Cancelled.

**70.** Cancelled.

That all error(s) being corrected in this reissue application including those corrected in amendments referred to above arose without any deceptive intention on the part of the applicant(s).

The undersigned hereby each declare that all statements made herein of their own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

I hereby appoint the following attorney(s) and/or agent(s): David L. Stewart, Reg. No. 37,578; admitted under 37 CFR 10.9(b) of

> Allen, Dyer, Doppelt, Milbrath & Gilchrist
> 255 S. Orange Avenue
> Suite 1401
> Orlando, Florida 32801

Direct Telephone Calls to:  David L Stewart at 321.725.4760

with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith, and all future correspondence should be addressed to them.

| Full name of first inventor:  Antonio Cantoni | |
|---|---|
| Inventor's signature: | Date: 6 Feb 2003 |
| Residence:  AUSTRALIA | |
| Citizenship:  AUSTRALIA | |
| Post Office Address:  10 YALLAMBEE Pl. City Beach 6015 W. Australia | |
| Full name of second inventor:  Robert M. Newman | |
| Inventor's signature: | Date: |

Residence:

Citizenship:

Post Office Address:

Docket No.: 63956-011                                                          PATENT ~~Comment~~
                                                                                        ~~Comment~~

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In re Application of                    :

Antonio Cantoni, et al.                 :

Serial No.: 09/919,725                  :   Group Art Unit: 2662

Filed: July 31, 2001                    :   Examiner: Unknown

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### Reissue Declaration


Commissioner for Patents
Washington, DC 20231

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As a below named inventor, I hereby declare that:

My residence, post office and citizenship are as stated below next to my name.

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    ☐ is attached hereto.
    ☒ was filed on July 31, 2001 as Application Serial No. 09/919,725 and was
        amended in first, second, third and consolidating preliminary
        amendments filed heretofore and in an amendment following interview
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I acknowledge the duty to disclose information which is known to me to be material to patentability in accordance with Title 37, Code of Federal Regulations, Section 1.56.

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**Prior Foreign Applications(s):**

| Number | Country | Day/Month/Year filed | Priority Claimed |
|---|---|---|---|
| PI0884 | Australlia | Mar 17, 1987 | x |
| PCT/AU88/00075 | Australlia | March 17, 1988 | x |

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**Prior Provisional Application(s):**

| Application Number | Filing Date |
|---|---|
| | |

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**Prior U.S. Application(s):**

| Serial No. | Filing Date | Status: Patented, Pending, Abandoned |
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| 07/283,364 | April 28, 1989 | now U.S. Patent No. 5,050,166 issued September 17, 1991 |

The applicant believes that the original patent to be wholly or partly inoperative by reason of the patentee claiming less than he had a right to claim, namely by failing to assert claims of the following scope:

(Note claims 1-14 were issued in a previous reissue application Serial No. 122,934 Filed: September 17, 1993, now U.S. reissued patent RE 37,494 which issued on January 1, 2002. That U.S. reissue patent and this application are divisional reissue applications of U.S. patent 5,050,166.)

15.  A method of transmitting variable length messages on a network from a source to a destination, said method comprising

segmenting each message into a plurality of fixed length slots, each of which slots includes a header field and a message segment,

providing a source identifier field in the header field of each slot, said source identifier field including a source identifier code that is uniquely associated with the message to be transmitted,

providing a type field in the header of each slot,

coding into the type field, a code selected from a first code, a second code, and a third code, respectively representing a beginning of a message, a continuation of a message, and an end of a message,

transmitting the slots on the network, and

controlling the reassembly of received slots at the destination in accordance with said source identifier code, the first code, the second code, and the third code.

16.    Cancelled.

17. A method as claimed in claim 15, further comprising

transmitting a destination address field in the message segment of the first slot of the message, and

checking a destination address field associated with the message, for a match with an address associated with the destination.

18. A method as claimed in claim 15, further comprising storing message segments associated with a single message in a buffer.

19. A method as claimed in claim 18 further comprising

providing the source identifier code to a comparator in response to detection of said first code at said destination, and

in response to detection of the second code associated with a subsequently received slot providing the source identifier thereof to the comparator to check for a match, and

storing the message segment of the subsequently received slot in said buffer in response to detection of a match.

20. A method as claimed in claim 19, further comprising outputting the reassembled slots in the buffer from the buffer as a reassembled message in response to detection of said third code.

21. A method as claimed in claim 15, further comprising

coding, into the type field, a fourth code representing a single segment message, and

if said fourth code is detected in a slot received at the destination, storing the message segment thereof in a single segment buffer.

22. A method as claimed in claim 20, further comprising

providing multiple comparators and buffers at the destination so as to

enable simultaneous receipt of a plurality of messages, each having its

own source identifier code, and

storing the message segments of each message in respective buffers.

23. Apparatus for transmitting variable length messages on a network from a source to a destination in fixed length slots, said apparatus including:

a segmentation machine for segmenting the messages into fixed length

slots, each of which includes a header field and a message segment,

said segmentation machine including coding means

for providing a source identifier field in the header of each slot, said

source identifier field including a source identifier code that is

uniquely associated with the message to be transmitted, and

for providing a type field in the header field of each slot, and

for providing a code selected from a first code, a second code, and

a third code representing, respectively, a beginning of a

message, a continuation of a message and an end of a

message; and

a reassembly machine located, in use, at the destination, said reassembly

machine including control means for controlling reassembly of the slots

in accordance with respective source identifier codes of the slots, said

control means being responsive to said source identifier code, said first

code, said second code, and said third code.

24. Cancelled

25.   Apparatus as claimed in claim 23 wherein the message includes a destination address field and wherein the segmentation machine is arranged to transmit the destination address field in the message segment of the first slot of the message.

26.   A method of transmitting a variable-length message on a network from a source having a source address to a destination having a destination address, said method comprising:

  segmenting the variable-length message into a plurality of fixed length slots including a first slot, continuing slots, and a last slot, each of said fixed length slots including

    a header field that includes a source identifier field, the source identifier field being substantially shorter than said destination address, and

    a message segment;

  providing a source identifier code in the source identifier field, said source identifier code being associated with the variable-length message;

  providing a type field in the header of each slot,

  coding. into the type field. a code selected from:

    a first code representing a beginning of a message,

    a second code representing a continuation of a message, and

    a third code, representing an end of a message;

transmitting the slots on the network; and

controlling reassembly of slots at the destination in accordance with the

source identifier code, first code, second code, and third code of slots

received at the destination.

27. Apparatus for transmitting variable-length messages on a network from a

source having a source address to a destination having a destination address in

fixed length slots, said apparatus including:

a segmentation machine for segmenting each message into a plurality

of fixed length slots including a first slot, continuing slots, and a last

slot, each of said slots including

a header field that includes a source identifier field, the source

identifier field being substantially shorter than said destination

address,

and a message segment;

coding means for providing the source identifier field with a source

identifier code that is uniquely associated with the message to be

transmitted for providing a type field in the header field of each slot,

and for providing a code selected from a first code, a second code, and

a third code representing, respectively, a beginning of a message, a

continuation of a message and an end of a message; and

a reassembly machine located, in use, at the destination, said

reassembly machine including control means for controlling

reassembly of slots in accordance with respective source identifier codes, the first code, the second code, and the third code of the slots.

28. A method for the connection-oriented transfer of variable-length messages in fixed-length slots from a source node having a source address to a destination node having a destination address, the method comprising:

      segmenting each message into a plurality of fixed-length slots including a first slot, continuing slots and a last slot, each of the slots including a header field and a message segment;

      providing, in the header field of each of the slots, a source identifier code associated with the message,

      providing a type field for holding a code in the header of each slot,

      coding into the type field, a code selected from a first code, a second code, and a third code, respectively representing a beginning of a message, a continuation of a message, and an end of a message,

      transmitting the slots from the source node; and

      controlling reassembly of the message on the basis of information in the header field of slots received at the destination node.

29. The method as claimed in claim 28 further comprising storing, in a buffer at the destination node, message segments associated with a single message.

30. The method as claimed in claim 29, further comprising

providing, to a comparator, the source identifier code of the first slot
received at the destination node;

providing, to the comparator, the source identifier code of each
subsequently received slot; and

storing the message segment of the subsequently received slot in the
buffer in response to an occurrence of a match between the source
identifier code of the first slot and the source identifier code of
subsequent slots.

31.    The method as claimed in claim **30**, further comprising outputting a
reassembled message from the buffer in response to detection of the third code.

32.    The method as claimed in claim **30**, further comprising

providing multiple comparators and buffers at the destination node to
enable simultaneous receipt of a plurality of messages, each having its
own source identifier code, and

storing message segments from each message in a separate buffer.

33.    An apparatus for the connection-oriented transfer of variable-length
messages in fixed-length slots from a source node, having a source address, to a
destination node, having a destination address, the apparatus comprising:

a segmentation machine for segmenting each message into a plurality of
fixed-length slots including a first slot, continuing slots, and a last slot,
each of the fixed-length slots including a header field, and a message

segment, the segmentation machine being located, in use, at the source node;

a coder for providing, in the header field of each slot,

a source identifier field for holding a source identifier code associated with the message to be transmitted, and

a type field, for holding a code selected from a first code, a second code, and a third code, respectively representing a beginning of a message, a continuation of a message, and an end of a message, and

a reassembly machine for controlling reassembly of slots into the message in accordance with information in the header field, the reassembly machine being located, in use, at the destination node.

34. The apparatus as claimed in claim 33 wherein the reassembly machine further comprises a selector for checking the third code and for providing source identifier codes to the comparator for comparison with subsequently received source identifier codes.

35. The apparatus as claimed in claim 34, wherein the reassembly machine further comprises a plurality of comparators for enabling concurrent receipt of slots associated with different messages.

36. The apparatus as claimed in claim 35, further comprising means for providing source identifier codes of received slots to the plurality of comparators,

thereby enabling the comparators to match slots having the same source identifier codes.

37. The apparatus as claimed in claim 36, further comprising:

a plurality of buffers for the message segments of the slots, and

a buffer selector circuit for selecting a particular buffer for receipt of all message segments of slots having the same source identifier code.

38. The apparatus as claimed in claim 34, wherein the controller is configured to output a reassembled message from the buffer in response to detection of a third code, the reassembled message being associated with the source identifier code of the slot containing the detected third code.

39. The method of claim 15 in which the source identifier code is a label which enables the logical association of all segments belonging to said message and which enables them to be reassembled into the original message.

40. The apparatus of claim 23 in which the source identifier code is a label which enables the logical association of all segments belonging to said message and which enables them to be reassembled into the original message.

41. Cancelled

42. Cancelled.

43. Cancelled.

44.　Cancelled.


45.　A method of transmitting variable length messages on a network to a
destination having a destination address, said method including the steps of:
segmenting each message into a plurality of fixed length slots including a first
slot, continuing slots, and a last slot, each of said slots including a header
field, which includes a source identifier field which is substantially shorter
than said destination address, and a message segment;
providing a source identifier code in the source identifier field, each source
identifier code being associated with the message to be transmitted;
entering said destination address in the message segment of said first slot;
transmitting the slots on the network; and
controlling reassembly of slots in accordance with the source identifier code.


46.　Apparatus for transmitting variable length messages on a network to a
destination, said apparatus including:
a segmentation machine segmenting each message into a plurality of fixed
length slots including a first slot, continuing slots, and a last slot, each of
said slots including a header field which includes a source identifier field
and a message segment;
said segmentation machine providing a source identifier code in the source
identifier field, each source identifier code being associated with the

message to be transmitted, and entering said destination address in the

message segment of said first slot;

a transmitter transmitting the slots on the network; and

a reassembly machine controlling reassembly of slots in accordance with the

source identifier codes.

47. The method of claim **15** in which the step of coding into the type field

comprises using each of the first code, the second code, and the third code in the

headers of slots associated with a message.

48. The apparatus of claim **23** in which the coding means provides each of the

first code, the second code, and the third code in the headers of respective slots

associated with a message.

49. The method of claim **26** in which the step of coding into the type field

comprises using each of the first code, the second code, and the third code in

respective headers of slots associated with a message.

50. The apparatus of claim **27** in which the coding means provides each of the

first code, the second code, and the third code in the headers of slots associated

with a message.

51.    The method of claim 28 in which the step of coding into the type field comprises using each of the first code, the second code, and the third code in respective headers of slots associated with a message.

52.    The apparatus of claim 33 in which the coder provides, in respective header fields of slots associated with a message, each of the first code, the second code, and the third code.

53. Cancelled.

54. Cancelled.

55. Cancelled.

56. Cancelled.

57.    A method for connection-oriented transfer of variable-length messages in fixed-length slots via a source node and a destination node from a source having a source address to a destination having a destination address, the method comprising:

    segmenting each message into a plurality of fixed-length slots including a
        first slot, continuing slots and a last slot, each of the slots including a
        header field and a message segment;

    providing, in the header field of each of the slots, a source identifier code
        associated with the message,

    providing a type field in the header of each slot for holding a code,

coding into the type field a code for distinguishing a last slot from prior

slots;

transmitting the slots from the source node; and

controlling reassembly of the message in accordance with information in

the header fields of slots received at the destination node.

58. An apparatus for connection-oriented transfer of variable-length messages in fixed-length slots via a source node and a destination node from a source having a source address, to a destination having a destination address, the apparatus comprising:

a segmentation machine for segmenting each message into a plurality of

fixed-length slots including a first slot, continuing slots, and a last slot,

each of the fixed-length slots including a header field, and a message

segment, the segmentation machine being located, in use, at the

source node;

a coder for providing, in the header field of each slot,

a source identifier field for holding a source identifier code associated with

the message to be transmitted, and

a type field, for holding a code for distinguishing a last slot from previous

slots; and

a reassembly machine for controlling reassembly of slots into the

message in accordance with information in the header fields of slots

received at the reassembly machine, the reassembly machine being located, in use, at the destination node.

59.    Apparatus for transmitting variable length messages in fixed length slots on a network, via a source node and a destination node, from a source having a source address to a destination having a destination address, said apparatus including;

a segmentation machine for segmenting the messages into fixed length slots, each of which includes a header field and a message segment, said segmentation machine including a coder providing

a source identifier field in the header of each slot, said source identifier field including a source identifier code that is associated with the message to be transmitted, and

a type field in the header field of each slot, and

a code in the type field selected from a first code, a second code, and a third code representing, respectively, a beginning of a message, a continuation of a message and an end of a message; and

a reassembly machine located, in use, at the destination, said reassembly machine controlling reassembly of the slots in accordance with respective source identifier codes of the slots, said reassembly machine being responsive to said source identifier code, said first code, said second code, and said third code.

60. Cancelled.

61. Cancelled.

62. Cancelled.

63. Cancelled.

64. The method of claim 58 in which the source identifier code is a label which enables the logical association of all segments belonging to said message and which enables them to be reassembled into the original message.

65. The method of claim 58 in which the step of coding, into the type field, field comprises using each of the first code, the second code, and the third code in the headers of slots associated with a message.

66. The method of claim 59 in which the source identifier code is a label which enables the logical association of all fixed length slots belonging to said message and which enables them to be reassembled into the original message.

67. The method of claim 59 in which the step of coding into the type field comprises using each of the first code, the second code, and the third code in the headers of slots associated with a message.

68. Cancelled.

69. Cancelled.

70. Cancelled.

That all error(s) being corrected in this reissue application including those corrected in amendments referred to above arose without any deceptive intention on the part of the applicant(s).

The undersigned hereby each declare that all statements made herein of their own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

I hereby appoint the following attorney(s) and/or agent(s): David L. Stewart, Reg. No. 37,578; admitted under 37 CFR 10.9(b) of

> Allen, Dyer, Doppelt, Milbrath & Gilchrist
> 255 S. Orange Avenue
> Suite 1401
> Orlando, Florida 32801

Direct Telephone Calls to: David L. Stewart at 321.725.4760

with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith, and all future correspondence should be addressed to them.
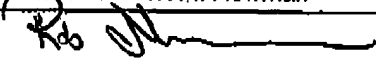
| Full name of first inventor: Antonio Cantoni | |
| --- | --- |
| Inventor's signature: | Date: |
| Residence: | |
| Citizenship: | |
| Post Office Address: | |
| Full name of second inventor: Robert M. Newman | |
| Inventor's signature: | Date: 8 JAN 2003 |

Residence:     9  RIVERSIDE DRIVE  MOSMAN  PARK  WA  AUSTRALIA  6012
Citizenship:   AUSTRALIAN
Post Office Address:   AS  ABOVE

Docket No.:  63956-011 (80301_CON1)                          **PATENT**

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of                          :

Antonio Cantoni, et al.                       :

Serial No.: 09/919,725                        :     Group Art Unit: 2662

Filed: July 31, 2001                          :     Examiner: Unknown

For:   TRANSFER OF MESSAGES IN A MULTIPLEXED SYSTEM

### Supplemental Reissue Declaration

Commissioner for Patents
Washington, DC  20231

Sir:

As a below named inventor, I hereby declare that:

My residence, post office and citizenship are as stated below next to my name,

I believe I am the original, first and sole inventor (if only one name is listed below)
or an original, first and joint inventor (if plural names are listed below) of the subject
matter claimed and for which a patent is sought on the invention entitled
TRANSFER OF MESSAGES IN A MULTIPLEXED SYSTEM, the specification of
which

    ☐ Is attached hereto.
    ☒ was filed on July 31, 2001 as Application Serial No. 09/919,725 and was
       amended in first, second, third and consolidating preliminary
       amendments filed heretofore and in an amendment following interview,
       filed on December 13, 2002.

I hereby state that I have reviewed and understand the contents of the above
identified specification, including the claims, as amended by the amendments
referred to above.

I acknowledge the duty to disclose information which is known to me to be material to patentability, in accordance with Title 37, Code of Federal Regulations, Section 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, Section 119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

**Prior Foreign Applications(s):**

| Number | Country | Day/Month/Year filed | **Priority Claimed** |
|---|---|---|---|
| PI0884 | Australlia | Mar 17, 1987 | X |
| PCT/AU88/00075 | Australlia | March 17, 1988 | X |

I hereby claim the benefit under 35 USC §119(e) of any United States provisional application(s) listed below.

**Prior Provisional Application(s):**

| Application Number | Filing Date |
|---|---|
| | |

I hereby claim the benefit under Title 35, United States Code, Section 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, Section 112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, Section 1.56 which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

**Prior U.S. Application(s):**

| Serial No. | Filing Date | Status: Patented |
|---|---|---|
| 07/283,364 | April 28, 1989 | now U.S. Patent No. 5,050,166 issued September 17, 1991 |
| 08/122,934 | September 17, 1993 | Status: Patented now re-issue Patent No. RE 37,494 issued January 1, 2002 |

I believe the original patent to be wholly or partly inoperative by reason of the patentees claiming less than they had a right to claim, namely by failing to assert claims of the scope recited in the previous declaration and more particularly by:

1. Unnecessarily including the term "uniquely" with reference to the association between the source identifier code and the message to be

transmitted, which limitation has been removed from all independent claims except independent claims 15, 23 and 27; and

2. With respect to at least claims 15, 23 and 27, unnecessarily including a "destination address" in a message segment which limitation has been removed from claims 15, 23 and 27.

All error(s) being corrected in this reissue application including those corrected in amendments referred to above, arose without any deceptive intention on the part of the applicant(s).

The undersigned declare that all statements made herein of their own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

I hereby appoint the following attorney(s) and/or agent(s): David L. Stewart, Reg. No. 37,578; admitted under 37 CFR 10.9(b). of

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> 255 S. Orange Avenue
> Suite 1401
> Orlando, Florida 32801

Direct Telephone Calls to:   David L. Stewart at 321.725.4760

with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith, and all future correspondence should be addressed to them.

| Full name of first inventor: Antonio Cantoni | |
| --- | --- |
| Inventor's signature: | Date: |
| Residence: | |
| Citizenship: | |
| Post Office Address: | |
| Full name of second inventor: Robert M. Newman | |
| Inventor's signature: | Date: 19/3/03 |
| Residence:   9  RIVERSIDE DRIVE, MOSMAN PARK, WA  AUSTRALIA 6012 | |

Citizenship:      AUSTRALIAN
Post Office Address:      AS ABOVE

Docket No.: 63956-011 (80301_CON1)

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or an original, first and joint inventor (if plural names are listed below) of the subject
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| Application Number | Filing Date |
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with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith, and all future correspondence should be addressed to them.

| Full name of first inventor: Antonio Cantoni | |
|---|---|
| Inventor's signature: | Date: 18 March 2003 |
| Residence: 10 YALLAMBEE PL, CITY BEACH 6015 W. AUSTRALIA | |
| Citizenship: AUSTRALIA | |
| Post Office Address: 10 YALLAMBEE PL, CITY BEACH 6015 W. AUSTRALIA | |
| Full name of second inventor: Robert M. Newman | |
| Inventor's signature: | Date: |
| Residence: | |

**Citizenship:**

**Post Office Address:**